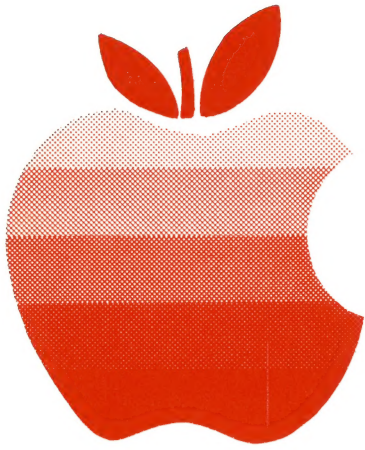




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80-column Boards

DOS 3.3 Patch I

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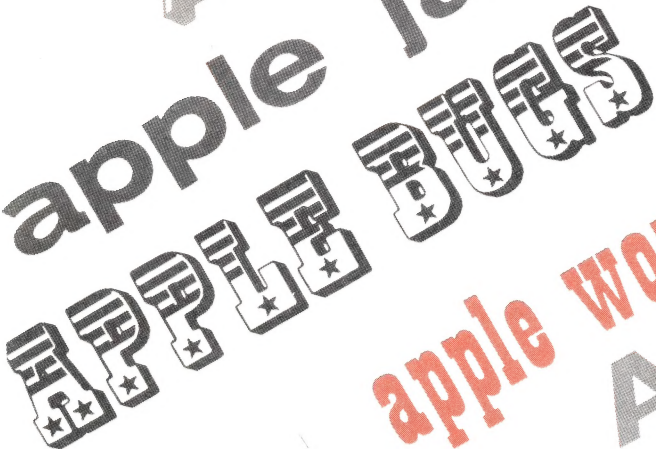
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Editor, APPLESauce
Rolfe Hall 3303, UCLA
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(213) 450-8880

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Earl Rand
Editor

June 1, 1981

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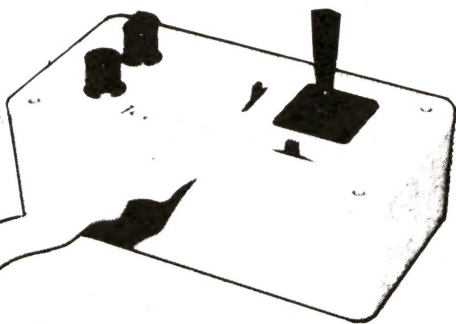
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FLOATING ROCKS AND FLEETING RUNNERS: A MOVING REVIEW

Will Kessler

There are, I think, four qualities an action game must possess if it is to be truly successful: effectiveness, addictiveness, useability, and originality. Both James Nitchals' ASTEROID FIELD and Timothy Smith's OLYMPIC DECATHLON meet the effectiveness requirement. ASTEROID FIELD has superb black-and-white, finely-detailed graphics (in inverse and regular), as well as mindboggling sound effects which closely resemble those of the original two (or more) voice arcade game. DECATHLON also has great effects: realistic color, hi-res animation (which is highlighted by free-flowing, animated athletes and scrolling groundscapes), a realtime scoreboard, and the music of the Olympics!

As for the quality of addictiveness, DECATHLON doesn't fill the bill. The thought of going through an entire Decathlon just to win a single game (or the probability of wearing one's fingers and computer out before attaining that end) is frustrating. If at first one gets close to his goal and then fails, he normally will try again; but if, regardless of how often he tries, one never, for example, succeeds even once at the Pole Vault, he finally gives up in despair.

ASTEROID FIELD is, on the other hand, a different story. I have watched long lines of "gamers" forming just for the pleasure of hearing its rhythmic drumbeats and the whine of an approaching alien. The only thing that can stop them from playing again and again is a blackout.

From the standpoint of useability, DECATHLON again fails to satisfy. For most of the running games, the computer keyboard must be used. To gain speed, the player must alternately press two keys. If one's computer keys haven't worn out by the time he's finished two full-length DECATHLONS, he ought to contact the authors of the GUINNESS BOOK OF RECORDS. Unlike DECATHLON, ASTEROID FIELD scores a perfect 10 on the useability scale. Four of its five variations involve paddles or joysticks, and because of this version's "Auto-thrust" and "Auto-fire," even the player most loyal to the original version can't complain of its lack of convenience.

Finally, and unfortunately, Nitchals' game fails the last test. It is NOT original! If the potential buyer dislikes the arcade versions of ASTEROIDS, he shouldn't buy this game. OLYMPIC DECATHLON is original, and although its games have been around for centuries, no one has ever played them quite the way one plays them when he plays DECATHLON. It would, for example, be hard to imagine Bruce Jenner running the hurdles with two paddle buttons attached to his legs, or approaching the high jump via the SPACE, X, and RETURN keys of an Apple.

Summing up, one might reasonably contend that ASTEROID FIELD equals its predecessor in the arcade, and that DECATHLON doesn't equal the Grecian Games. But if the software shopper dislikes ASTEROID-type games, he should look into OLYMPIC DECATHLON.

THE COMPUTER WORKSHOP

Kids (ages 8 - 17) in the L.A. area can learn programming, graphics and sound, create games, and a lot more in small groups with personal individualized instruction. Tricia Jordan and Charles Bell are running workshops from 29 June

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A BIT ABOUT BIT MAPS

Dave Edwards

In the November/December issue of APPLESAUCE, there was a program to produce disk menus by Henry Ras. It looked pretty nice, but I haven't worked up the initiative to type in the fairly long source for it. However, one of the things it does is give you the free space left on the disk. I thought this would be nice, so I typed in just that part of the program. It seems to work, but only gives a rough idea of how much space is actually left on the disk (it doesn't always change when I add or delete a file). I don't know the reason for this, since I don't know the inner workings of DOS, and I also use the SVA 8" controller board. That is a question for someone else.

But it became apparent to me though that there was a better way to tally up the number of free sectors. As was noted in the article, this information is stored in a "bit map" form. This means that each byte is used to hold 8 "yes or no" indicators instead of representing (usually a part of) a number. In other words, the usual interpretation given to a byte representing a number is that each bit increases in value by powers of two as you move to the left. This is not the case in a bit map, since each bit has an identical value of one.

This means that to tally up the number of bits set in the bit map requires some manipulation. The program reads in the bit map one byte at a time with the use of PEEK statements. This causes BASIC to interpret the byte as a number. We have to re-interpret this number in it's bit map form. One easy way to accomplish this is to sequentially check each bit to see if it is set. The sticky part is that it is in decimal now.

This function can be performed as follows. Since the high-order bit of a byte has a decimal value of 128, we will start with that value. If the decimal number is equal to or greater than 128, it means that bit was set in the byte, otherwise not. So if it is equal to or greater than 128, we add one to our

running count of free sectors, and subtract 128, thus effectively clearing the bit. We can now divide 128 by 2 to give the value of the next most significant bit, and do the same test to see if that bit is set. In other words, if the resulting number is now equal to or greater than 64, we increment our count again. This proceeds down to a value of one for the least significant bit.

Using this method, we can replace about 25 lines by 6 like this:

--Replace lines 190-380 with...

```
190 X=128
200 IF TB >=X THEN FS=FS+1:
    TB=TB-X
210 X=X/2: IF X>=1 THEN 200
220 RETURN
```

-In lines 430 and 450, replace

```
--- :IF TB > 15 THEN GOSUB 230 with
--- :GOSUB 190
```

-Delete lines 440 and 460

This method will cause the program to run any faster (see Henry Ras's article), but if you're a lazy typist like I am, the shorter length will seem like an improvement!

UTILITY NEEDED

What if track 11 (DEC 17) is wiped out? That is, the catalog is gone? With lots of labor, one can look at each sector to see if it's a header for a file, take down the sectors the file uses, then go and reconstruct the catalog. But this is a real pain. We need a utility that reconstructs the catalog automatically. If you have such a utility, send it to the editor. And write an article for APPLESAUCE.

Modem Magic 2.0

A must for any computer bulletin board system user. Allows easy up- and downloading of text to and from remote computers. The text may be prepared using the built in line editor. Other facilities allow for the transfer of Integer, Applesoft or Basic programs. This software will pay for itself in a short while with the savings from long distance toll charges.

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Version 3.0 has in addition a telephone directory, dialing and answering service using a loudspeaker phone and an environmental controller.

Requires 48K Apple, Disk, Printer, Micromodem II, Introl/X-10 controller system, BRS Modules and a Companion Handsfree phone \$199

Dos 3.3 Utilities

Read, Write and Edit sector.

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With this software and the Apple Graphics Tablet creativity can really commence. Extra commands allow for the building of standard Applesoft Shapetables directly from the tablet including indexing, full Hi and Lo bit colors, outlines, scanned blocks etc., in the display mode these shapes may be rotated, enlarged, shrunk and even animated.

To build a logo or picture the regular tablet commands still function but extras such as color brush and label give greater flexibility.

Requires 48K Apple, Disk & the Apple Graphics Tablet \$99

Paddle Shapemaker

A similar shape table maker as above but uses the game paddles or a joystick to define each definition. A fine utility for programmers that believe a picture is worth a thousand words.

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FREE SPACE UPDATE TO DISK MENU

Henry Ras

I would like to thank Dave Edwards for his article 'A Bit About Bit Maps' referencing my article on a Disk Menu in the Nov/Dec issue of APPLESAUCE. He addressed two areas that may be beneficial to explore a little further. One area was the method of tallying the free sectors and the other was the accuracy of the tally when using the SVA 8" disk controller.

The tally method I used was primarily concerned with speed of calculation of the free space. Therefore using Dave's method, I worked up the following changes to make the speed penalty of using arithmetic minimal. Please use Dave's article for an excellent explanation of how 'bit maps' function.

Replace lines 190-380 with...

```
190 IF TB=255 THEN FS=FS+8
    : RETURN
195 X=128
200 IF TB >=X THEN FS=FS+1:
    TB=TB-X
210 X=X/2: IF X>=1 THEN 200
220 RETURN
```

-In lines 430 and 450, replace

```
---- :IF TB > 15 THEN GOSUB 230 with
---- :IF TB > 0 THEN GOSUB 190
```

-Delete lines 440 and 460

These changes in lines 190, 430 & 450 will bypass the arithmetic if the entire track is either available (TB=255) or used (TB=0). This results in the following speed comparisons to calculate free space using a 16 sector disk.

	original Disk version	Dave's version	modified version
Empty-	2.1 sec	9.7 sec	1.9 sec
1/2 -	3.4 "	8.4 "	3.9 "
Full -	1.4 "	6.9 "	1.4 "

The second issue was regarding the use of disks with more than 16 sectors or 35 tracks. The DOS VTOC can be modified to utilize as many as 32 sectors and 50 tracks or other combination that equals a maximum of 1600 sectors. The original Free Space tally routine did not address those expanded Bit Map positions therefore may have been inaccurate in calculating free sectors in modified DOS. The following modifications will allow inspection of all Bit Map positions of the DOS VTOC, however calculation time will be increased which may make a machine language routine very attractive.

Replace line 420 with...

```
420 FS=0:TB=0:I=0:FOR J=
    VT+56 TO VT+255:I=I+1
    :IF I=3 THEN I=0
--Delete lines 450 & 460
```

For those that are interested in using the free space routine independent of Disk Menu program the 'VTOC Read' routine in DOS can be called from BASIC. Normally the DOS VTOC buffer is updated with disk activity such as loading or saving program or text files. But this may not occur with an independent Free Space program when disks are checked for free space only. The following modification will call the 'DOS Read VTOC' routine with each running of Free Space. The call address for a 48 K APPLE with DOS 3.2 or 3.3 is CALL -20489.

--Replace line 400 with...

```
400 VT=PEEK(977)+PEEK(978)*256
    :CALL VT+4664: VT=VT+5628:
    VN=PEEK(VT+6): REM GET
    VTOC FROM DOS (ANY MEMORY
    SIZE)
```

OAC MEETINGS

Our meetings are scheduled at noon in room 2224 Young Hall at UCLA.

Park in lot #9 on Westwood Blvd or in lot #2 at the corner of Hilgard and Westholm.

DOS 3.3 PATCHES Number 2

Lou P. Rivas

Those of you who read the first DOS 3.3 PATCH in Applesauce 2.3 probably also read the letter from Dan DuBois indicating that DISK ZAP (or an equivalent program) could be used to apply the fix to an existing disk. Considering the possibility of destroying the original - ever do a WRITE when you meant to READ? - I thought it best to present the patch in a form that would minimize the chances of hanging ones self. However, as has been pointed out, there's no reason I shouldn't supply the rope.

The table below shows the relationship between DOS 3.3 on disk and in core. The first column gives the DOS track/sector. The second column gives the "boot" address for a "Master" disk - any addresses in DOS (target of JMP, JSR, etc.) will be in this range before relocation. The third column gives the relocated addresses (or "Slave" disk "boot" addresses) for a 48K Apple. The two sectors that are not relocated are the relocation program in a "Master" disk; in a "Slave" disk these two sectors contain binary zeros. The last column gives the addresses where the Master Create program loads the DOS.

00 08	\$3E00	\$BE00	\$1A00
00 09	\$3F00	\$BF00	\$1B00
00 0A	\$1B00	-- --	\$1C00
00 0B	\$1C00	-- --	\$1D00
00 0C	\$1D00	\$9D00	\$1E00
00 0D	\$1E00	\$9E00	\$1F00
00 0E	\$1F00	\$9F00	\$2000
00 0F	\$2000	\$A000	\$2100
01 00	\$2100	\$A100	\$2200
01 01	\$2200	\$A200	\$2300
01 02	\$2300	\$A300	\$2400
01 03	\$2400	\$A400	\$2500
01 04	\$2500	\$A500	\$2600
01 05	\$2600	\$A600	\$2700
01 06	\$2700	\$A700	\$2800
01 07	\$2800	\$A800	\$2900
01 08	\$2900	\$A900	\$2A00
01 09	\$2A00	\$AA00	\$2B00
01 0A	\$2B00	\$AB00	\$2C00
01 0B	\$2C00	\$AC00	\$2D00
01 0C	\$2D00	\$AD00	\$2E00
01 0D	\$2E00	\$AE00	\$2F00
01 0E	\$2F00	\$AF00	\$3000
01 0F	\$3000	\$B000	\$3100
02 00	\$3100	\$B100	\$3200
02 01	\$3200	\$B200	\$3300
02 02	\$3300	\$B300	\$3400
02 03	\$3400	\$B400	\$3500
02 04	\$3500	\$B500	\$3600

Rest of track 2 is unused.

DISK TRACK SECTOR	MASTER LOAD POINT	SLAVE LOAD POINT	MASTER CREATE BUFFER
00 00	\$3600	\$B600	\$1200
00 01	\$3700	\$B700	\$1300
00 02	\$3800	\$B800	\$1400
00 03	\$3900	\$B900	\$1500
00 04	\$3A00	\$BA00	\$1600
00 05	\$3B00	\$BB00	\$1700
00 06	\$3C00	\$BC00	\$1800
00 07	\$3D00	\$BD00	\$1900

Now to use this new found knowledge. When Master Create is used to update a "Slave" disk it is necessary to know the name of the "Hello" program. Unfortunately, there is no command that displays this information. DOS keeps the "Hello" program file name in the primary filename buffer at \$AA75. Using the table we see that on the disk this is in track \$01 sector \$09. Use DISK ZAP (or equivalent) to verify this is so.

CONFESSIONS OF AN APPLEHOLIC

Tom Leyland

It all began quite innocently really, (just about 2 years ago).

At the time, I was the only person I knew who owned one. A bright, shiny, new, 16K Apple II Plus, an RF modulator, and a cassette recorder.

Friends were politely interested but would invariably ask, "but Tom, What can you do with it?"

Well..., I could play Brick Out and Dragon Maze and Wumpus.

One thing I could not do however, was play Apple Invaders. As I recall it required 24K and Integer basic. That would be several hundred dollars and months in the future.

I started attending meetings, "users groups". There were people there with Apples. Some had disk drives, some had modems, good God, some had dual disk drives and a printer. I was amazed, I was ecstatic, I was ... hooked. I began staying up late, began writing programs, began to read computer magazines. I began to skip lunch so I could finance my "habit".

Christmas couldn't come quick enough that year, I was desperate for more memory, (these were the days when 16K upgrades were more than \$100). The time came when I got a disk drive, I needed a disk so I could rub elbows with the big boys. I wanted to sit around and talk DOS.

By this time my family and friends started to abandon me. They couldn't relate to a man who sat in front of a machine all day, peeking & poking and blabbering about bits & bytes and RAM & ROM and REMS.

They left, but others came to take their place. I had Dysan and D.C. Hayes, and Mountain Hardware. I had the Lawrence Hall of Science, I had Apple Invaders ... (finally).

Well that's all in the past, the day when I was diagnosed an I/O Obsessive.

One of those people who can't resist the soft curves of the Apple keyboard, the firm grip of the game paddle, or the inviting wink of the Apple cursor.

So be aware of the symptoms, and take care not to let the same thing happen to you. Luckily I caught it in time and I've learned how to control it, I've learned how to say no.

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DB MASTER A User's Point of View

Joel L. Amromin

The first serious Data Management System to appear on the APPLE is the CCA DMS from Personal Software. It used a technique called ISAM to keep track of records for quick access. It did a good job of managing information. But many users found it too difficult to use and non-computer people (even many computer people) found that the manual was a disaster. In the meantime, some other systems began to appear: The Informer, The Data Factory, and a host of new programs. I would like to tell you about my experiences with one of the new systems: DB Master from Stoneware.

When the advertising for DB Master first appeared some time ago, I was very excited by the features it offered. It even purported to imitate some of the features of the larger more complex data management techniques. So when it finally arrived, I immediately purchased a copy and now have my own business accounting running on it. So I would now like to share with you some of the details of how the program works.

The program is supplied on a diskette that will only operate on a DOS 3.3 system with 48K of memory and Applesoft in ROM. The disk is not copyable, but Stoneware promptly sends you a backup disk when you send in your warranty card. The documentation says that the program requires at least one disk drive. While it will run with one drive, you would be very difficult to run with less than two. Even with two drives you will be swapping diskettes in and out. The best system would have three drives.

When I started using the system, I immediately began jumping from function to function. When I wasn't sure of something, I looked it up in the manual. I made so many mistakes that I began to think the program was a disaster. So I started over, this time going through the manual from the beginning and following

the examples in the book. All of a sudden, it began to work!

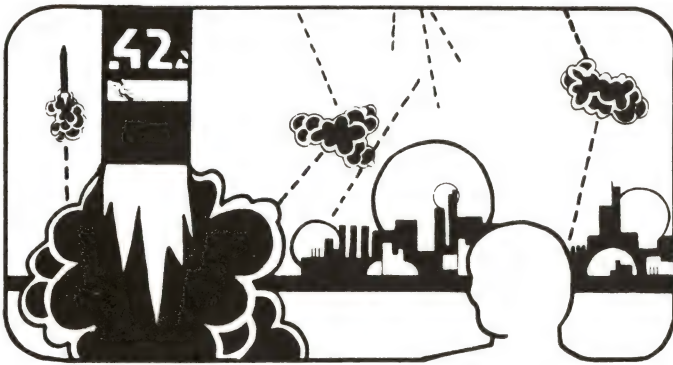
Thus, the well-written manual is really a tutorial. Once I went through it, I have only on very rare occasions had to refer to it again. This is because the list of available commands is always present at the bottom of the screen, and once you learn them.... And if you give an invalid command, type an invalid value, or mess up in any other way, the program simply rejects your command and prompts you again. It is even immune at most times to pressing RESET. (I haven't tried this without an autostart ROM. I assume it would crash if you RESET on the old monitor. The manual does not give the warm boot location.)

Creating a Data Base

The first step in using the program (after telling it how many disk drives you have) is to create the record form of the data base. This consists of telling the program what kinds of fields you want, how long they will be, where they will appear on the screen, and what defaults (if any) you want for each field.

You are led through this process in a very straightforward manner. A grid is displayed on the screen so that the rows and columns are labelled 1-24 and 1-40 respectively. You then select the type of field you want from a very rich choice of field types:

- 1) Alpha: This will accept any kind of data (letters, numbers, or any punctuation)
- 2) Numeric: There are three kinds of numeric fields, two of them store integers in one or two byte hunks on the disk. The other stores real values in five bytes.



In this arcade-quality action game you command the Nation's missile defense center to defend against a foreign missile attack. As missiles drop from the sky, you must shoot them while trying to protect your six cities and three missile bases. An automatically escalated skill level ensures that the better you get the tougher missile defense gets!

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WARNING: This game has been known to cause addiction and should be used with extreme caution!!!

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- 3) Dollar: This will automatically format data into dollars and cents. Whenever you enter such data it goes in calculator style, moving into the field from right to left. You don't have to enter the decimal point since it is handled automatically.
- 4) Y/N: This is a special one-character field which will only accept "Y" or "N" for an answer.
- 5) SS#: Social Security Number. This field will only accept 9 digit numbers. It automatically inserts the hyphens into Social Security Numbers.
- 6) Telephone: This is a special field formatted for phone numbers (including area code). You can specify a default area code if you wish.
- 7) Dates: These are actually 6 character strings which accept only digits. There are two kinds of dates. Regular dates are inputted by the user. Auto dates are inputted by the system. Any time a new record is written or an old one is modified, any auto date fields will be updated with the current date.

After selecting one of these types, you are asked where you want to place it on the screen, how many characters long you want it, and if you want any default value to be placed in it. Then it is placed on the screen exactly as it will appear when you are using it. In other words, you are defining not only what data will go into your data base, but how it will look on the screen.

While you are entering this information, you are also specifying which fields are going to be used for you primary ISAM key. By judicious assignment of fields, you can set it up to access any record on a diskette in three seconds.

When you have put everything on the screen that you wish. You are given a chance to edit it. You can change field

types, lengths, locations, and defaults. After editing, you can then add another screen to the definition. One record can have up to 1020 bytes or NINE screens, whichever comes first. Within that you can have up to 100 fields. You are limited to only up to 30 characters in a field, but that isn't a serious problem since you can put several 30 character fields in succession.

Don't be skimpy with field allocation. One of the beauties of DB Master is that if you have a bunch of blank spaces in a record, they are compressed down to just a few bytes. DB Master does a lot of compression. It is this compression technique which allows DB Master to simulate hierarchical data base systems (more on that later).

When you are all done, the program will create two data diskettes. One is called the "utility" disk. It contains your data format information and is also used for indexes and other miscellaneous stuff such as printer configurations and report formats.

Adding Records

Adding records to the data base is very easy. The screen which you designed before is displayed. Simply type in the data you want. If you try to type in something that does not fit the format that you defined (eg: a letter in a numeric field), the computer will beep and the cursor will not move to the next character.

This sort of error trapping is all over the program. If you try to type past the end of a field or backspace before the beginning, you just get a friendly beep.

If you make a mistake, such as misspelling a name, you can go backwards from field to field by pressing the escape key. Pressing the RETURN key without typing anything will leave a field unchanged. So if you have set up a default for a particular field, when the cursor lands on that field just press RETURN to leave it unchanged. To change it, just type in the change. As soon as you press a key other than RETURN, the contents of the field will be erased.



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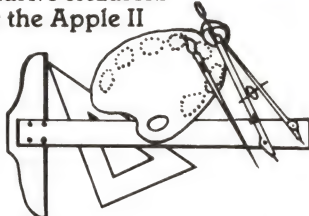
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If you have more than one page per record, you type CTRL/N to go to the next page. This can be done at any time. You don't have to cycle through unnecessary fields. CTRL/N will immediately go to the next page (unless you are in a partially completed date, phone number, or Soc Sec # field).

The cursor will never move to an auto date field since it is placed into the record by the system itself.

As soon as the record is the way you want it, press CTRL/A and the record is added to the data base. At any time, pressing CTRL/C will abort the entry process and return you to the main menu without adding the current record.

One real nice feature is the ability to go into a "last record default mode." In this mode, after you finish entering a record the program displays the form for the next record. But instead of displaying a blank form, the values from the previous record are left in place as defaults. This is real nice if you are entering a series of records that have several data items in common.

This article will conclude next month.

PROBLEMS WITH 2.4

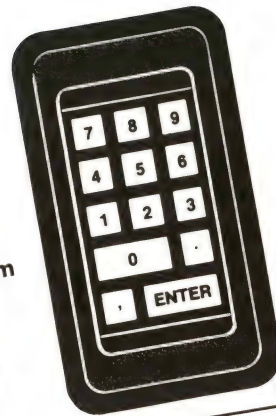
APPLESAUCE 2.4 was listed on a printer in a font that lacked quotes. Thus all the program listings are wrong. The editor is sincerely sorry for the problems this has caused readers.

Line 240 of Jerome Blumenthal's APPLEWRITER TO PIE CONVERSION program should have read:

```
240 IF P = 141 OR P = 224 OR P =
    96 THEN P = 32: IF I > 23
    OR F = 1 THEN I = 0 :
    F = 0 : PRINT : GOTO 290
```

Jerome has sent us "an improved version of the program, one that runs far more quickly and one which insures that line length will be no greater than 60 characters." You'll find this program in an upcoming issue of APPLESAUCE.

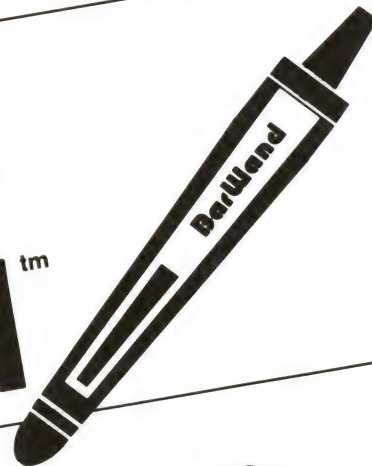
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REAL ESTATE ANALYZER
by Howardsoft
A Review

Eugene Cohen

There's a scene in the recent movie **THE OUTLAW JOSEY WALES** in which Chief George and Clint Eastwood are talking about "getting an edge" in a fight. In one exciting scene, Josey keeps the sun to his back. If you're into real estate and you don't have on-line access to a mini-computer, then "getting an edge" just might be a little difficult.

Howard Software, however, just might give the little guy a chance, with a bit of diligence, to get an edge on the big wheeler-dealers. The package that may do this is **The REAL ESTATE ANALYSER**, for only \$150. It provides projected cash flow and return on investment for up to a ten year period. After the model is constructed (costs, loans, expenses, income inflations and value), the projected values are calculated. The user can view them on the screen and print them out. Then the basis of the model can be quickly and easily changed and run again to see the influence of the new parameters.

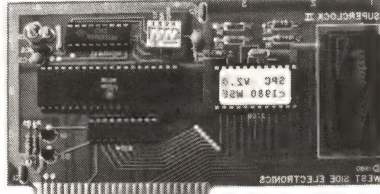
The parameters allowed for in the model are a bit limited. The only criticism I have is that it fails to allow enough parameters to see the effects of all this 1981-ish "creative financing". For example, balloon payments, no-interest loans, and one-year no-interest 2nd TDs.

I've owned two apartment houses and been partners in three others. In learning to use the **ANALYSER**, I entered past performances to see what should (or would) have happened versus what did happen. It was very interesting. I learned that, for one thing, I really didn't know how well the buildings had done in terms of "return on investment".

I plan not only to use the **ANALYZER** to help me ferret out good deals, but also to help me convince potential buyers of my current building that they're really getting a lot for their money! As this program easily shows, what is a good

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situation for one owner may not be a good one for another.

For the beginner in real estate, who hears how bad the market is right now, I think that it is very important that he look at potential investments with a program such as the **ANALYZER**. It should convince him that there are good income properties out there, just waiting for someone "with the edge" to buy them.

COMING NEXT ISSUE

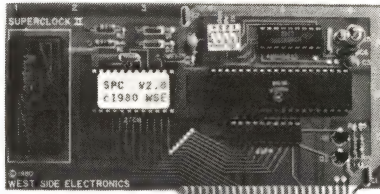
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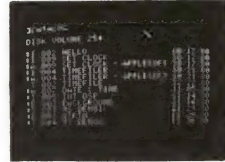
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A LETTER FROM DAVE HOGG

20 January 1981

Dear Earl,

I was using the new DOS 3.3 Lawrence Hall utilities and I found an error in the Integer Basic Disk Zap. In the catalog, there are apparently two files with the name DISK ZAP.I. However, one of them has a 'CONTROL Z' right after the visible 'Z' in ZAP. The first DISK ZAP.I should call the second one but as the program is now, it actually calls the Applesoft version of DISK ZAP. The fix for this is to load DISK ZAP.I and change line 400 to PRINT"RUN DISK ZzAP.I":END. Insert the usual 'CONTROL D' right after the first " and then a 'CONTROL Z' after the 'Z' in ZAP (where there's a small "z" here).

One nice thing about using the integer version is that you can use the mini-assembler when you are editing a sector you have read from a disk.

Best,

Doug Hogg



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VIDEO TERM (VIDEX) (VER 2.0)	7x9 1 + OPT EPROM	Y	N	85	Y		With Machine		Y	Y	N	N	CR-Y	Y	Y	Y	Y	9 L,S	Y
DOUBLE VISION (COMPTER STOPPE)	5x7 1/0	N	ON BOARD	57	Y			N	Y	Y	Y	Inverse	Y	Y	Pokes & Calls	N	Y	4 L	N
FULL-VIEW 80 (ROM VER 1.0) (CHAR GEN VER 104.1)	5x7 1 + OPT PROM	Option	GAME I/O	44	Y		Limited from Machine		Y	N	Y	Lower Case	N	CR- ^	Y	Y	Y	6 PRELIM	N
SMARTERM (ROM VER 1.1)	5x7 1 + GRAPH	N	GAME I/O	75	N		Ctrl Seq		Y	Y	Y	Inverse	Same as Cr-Y	CR- ^	Y	Y	Y	7.5	Y

*APPLE's 40 column speed = 100

Y=Yes N=No

THANKS

I would like to thank the many authors and reviewers who helped with this issue of APPLESAUCE. The list of reviewers and other assistants includes Joel Amromin, Cathy Andersen, Dan DuBois, Dave Edwards, Phil Ender, Dave Gordeon, George Guffey, Norm Haas, Bill Ho, Henry Ras, Lou Rivas, Eric Van Duser, and Elroy Wieck. Many thanks!

I would also like to thank the following companies for supplying software and hardware:

Nikki Hardin, Reston Publishing, for books to review,

Denise E.M. Enrose, also for books to review,

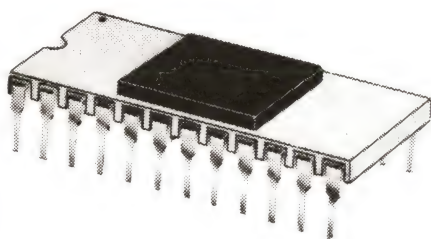
Mr. and Mrs. Paul Davis, Videx, for the loan of a Videx Enhancer board,

Lou Long, Stoneware Products, for a copy of DB MASTER for review, and

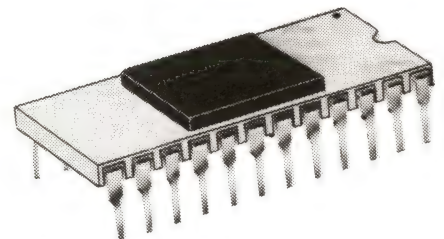
Howard Software Services, for copies of REAL ESTATE ANALYZER and TAX PREPARER for review.

Special thanks to Stephen and Betsy Speicher of Speicher Systems for the use of their Sanders printer to print this issue. Next issue we will also be using their WRITE-ON! word processor to print Applesauce.

Earl Rand
Editor



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by BILL BLUE

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Written in Applesoft and Machine language, Ascii Express II includes everything you'd expect in a complete communications package. It features a variety of powerful features including full support of upper/lower case, autodial and answer capabilities (when used with the Hayes Micromodem), and file oriented upload/download facilities.

A built-in line editor gives full editing functions, and programmable keyboard MACROS reduce complicated log-in procedures to a few simple keystrokes.

Downloaded files may be printed while being received, saved to disk, or printed later when offline. The copy mode allows everything shown on the screen to be saved in the large (20K) buffer.

Ascii Express II works with the Hayes Micromodem II, Apple communications card, the CCS Asynchronous Serial card, SSM-AIO Board, Lynx Telephone Linkage System, and many other communications devices.

Uses include:

- Send/receive letters/files from networks like the SOURCE, MICRONET, or other bulletin board type systems.
- Transferring program files between Apples, an Apple and a TRS-80, PET, etc.
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by BILL BLUE

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- Entirely in machine language for maximum speed and power.

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If you have a Z-80 card, you owe it to yourself to check this one out before you buy any communications software. If you don't have the Z-80 Softcard, you may want to get one just to run this package!

*Note: CP/M and Apple DOS files are not directly compatible.

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There is no additional BASIC syntax to learn, and most compilations can be performed with one simple command.

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- >All DOS functions are supported in exactly the same way as in the uncompiled BASIC program-nothing new to learn.
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- >Programs will normally execute 2 to 20 times faster after compilation.
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- >Variables may be designated as "local" to an Applesoft program or "global" to all Applesoft programs in memory, thereby facilitating inter-program communications.
- >Extensive use is made of pre-existing routines within the Applesoft ROM. This minimizes the memory required by compiled machine code.

*EXPEDITER II runs on any Apple computer with Applesoft in ROM, 48K and a disk drive. It will be available on July 1, 1981 for the introductory price of \$99.95.

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COPING WITH APPLE'S HIGH SPEED SERIAL CARD Part III

Jeff Mazur

At this point I had the iron heating up and was looking around for a suitable switch. Although a simple toggle switch would seem to be the obvious choice, I decided to use a momentary pushbutton switch instead. In this way, when I normally use the printer, it goes to the 80 character mode. If I want the 40 character mode with video display, I simply hold down the switch while the card is being initialized (by either an immediate or deferred PR#1 or a 1-CTRL-P).

Performing the modification is quite simple. Start by removing the serial card from your Apple (after you've turned the power off!) For a neater appearance, you may wish to use one of the spare wires running from the card to the DB-25 connector, in which case, you will also have to disassemble the male DB-25 connector on the cable coming from your printer. Looking at the back side of the board towards the top edge, you will see seven isolated pads just behind the DIP switch. These correspond directly to the seven switches; the other end of each switch is grounded. Also notice that there is a brown wire in the ribbon cable which goes to the hole marked "A" on the component side.

Take a piece of small gauge wire and connect the pad directly behind switch #6 to the brown wire at hole A. Make sure switch #6 is in the down or off position and then replace the board in the computer. Now connect the new switch to pins 1 and 7 of the DB-25 connector and re-assemble. Note that pin 1 is normally unused so if there is already another wire there it must be removed. Pin 7 is ground and will definitely have a wire there which must remain. If you use a pushbutton switch, remember that in order to select 40 character operation, you must depress the switch while the card is being initialized (e.g. in immediate mode: type PR#1 and then hold down switch while pressing <return>).

As with the handshaking modification, I have found that the few minutes spent on such a change can save a lot of time and annoyance in the everyday operation of my Apple. Although I would not argue that there aren't better serial boards available today, those of us with APPLE's High Speed Serial Card can still make the best of what we have.

ASSISTANCE NEEDED

Can you proofread? Can you review articles submitted to APPLESAUCE? Can you type? Do you have a disk drive? Do you know how to use an APPLE wordprocessor, such as PIE or Applewriter (or would you like to learn)? The APPLESAUCE editor needs editorial assistance. If you can spend three or four hours per month doing free volunteer work, then please call (213)450-8880.

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MICRO/APPLE I A Review

Jim Lan

What's the "mid-life crisis" for the Apple owner? Well, for the non-professional, it's when he's programmed all the easy stuff but just can't get on to the hard stuff. Ford Cavallari has edited a book of programs that spells relief for those suffering from M-LC. This book consists of 30 programming articles published in MICRO 6502 along with the programs on a DOS 3.2 diskette, all for \$24.95, from MICRO Ink, Inc, P.O. BOX 6502, Chelmsford, MA 01824.

Sections of the 216-page book are titled BASIC AIDS, I/O ENHANCEMENTS; GRAPHICS; RUNTIME UTILITIES; EDUCATION, GAMES, AND REFERENCE.

The programs are in Integer and Applesoft Basic and in Machine Language;

none are in Pascal, Forth, or LISP. They work, too. And the accompanying text explains what they're doing and how it's being done. Cavallari's intros to each section and each article are especially helpful, pointing out features the reader should look for. I found the Richard Vile's article on sorting especially enlightening. I believe that every beginner to intermediate Basic programmer will find a number of useful things in this stimulating book.

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VIDEX KEYBOARD AND DISPLAY ENHANCER A Review

Bill Ho

Another newcomer to the lowercase adaptor market, the Videx's Keyboard & Display Enhancer, as its name suggests, is more than just a lowercase adaptor. It will also convert your Apple's keyboard to a true typewriter keyboard with the SHIFT key modified. The user can input any of the 128 ASCII characters directly from the keyboard, but only 96 non-control characters can be displayed. The Enhancer is compatible with all softwares that use Paymar's lowercase adaptor.

Like some other lowercase boards, the Enhancer comes in two versions, one for Apple rev. 0 to 6 and one for rev. 7 and greater. Two versions differ only in a set of solder connections and are easily convertible. The Enhancer comes with a very good manual showing detailed procedures and explanations of the theory of operation. It also shows how you can burn your custom character sets on the popular 2716 EPROM.

There are two set of switches for the rev.7 Enhancer and only one set for the rev.0 to 6 model. Each set has four switches to handle selections for character sets, normal, inverse, flash, CTRL-RESET, alpha lock, unlock and default mode to normal Apple II keyboard. The top left set of switches are hard to see and reach. The shift lock mode is entered by pressing the RESET key and the shift unlock mode is done by pressing SHIFT-RESET. Reset the Apple is done by CTRL-RESET. This strange configuration might be very uncomfortable at the beginning, but one very easily adjusts to it.

The Enhancer will work with the word processing software, such as Pie and AppleWriter and with Pascal. The Enhancer is compatible with Videx's Videoterm, Z80 Softcard, and D.C. Hayes Micromodem. You will have to modify the Basic disk (only once) for the Language System or modify

your ROM for the on board Basic to correctly enter all ASCII's in Basic. A keyboard filter routine can be use instead of changing the ROM. Unlike other lowercase boards that use the ESC as SHIFT, the Enhancer will allow the user to use the Basic ESC key sequence for cursor control.

The Enhancer is very close to the solution of Apple II's lowercase problem. This is NOT just a lowercase adaptor, but a permanent cure to the problem. The extra feature that modifies the SHIFT key is its major advantage over other lowercase adaptors. The price tag of \$120 is not unreasonable for a well-made and nicely designed product like the Enhancer.



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by Barney Stone

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	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY

S	M	T	W	T	F	S
	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

APRIL

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MAY

	1	2	3	4	5	6
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32K + , Disk II, ROM/RAM Applesoft, Apple II/Apple II +

APLUS is a 4K machine language utility that adds the following structured programming commands to Applesoft basic: 1) WHEN...ELSE...FIN, 2) UNTIL, 3) WHILE, 4) UNLESS, 5) CASE, 6) SELECT (variable), and 7) (OTHERWISE). Multi-line IF...THEN statements are also supported. APLUS allows the use of "named" subroutines or "procedures". The programmer can now instruct a program to "DO CURVE-FIT" without worrying about the location of the subroutine. APLUS automatically indents "LIST"ed programs to clarify the logic flow. The APLUS "&CONVERT" command replaces the above structured programming commands with "GOTO"s and "GOSUB"s to provide a standard Applesoft program as output. New programs can now be written using "GOTO"-less logic.

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AOPT is a 2.2K machine language utility that will substantially reduce the size of an Applesoft program without affecting the operation of the program. AOPT automatically: 1) Shortens variable names, 2) Removes remarks, 3) Removes unreferenced lines, 4) Appends short lines together, 5) Removes extra colons, and 6) Renumbers line numbers. AOPT will convert a verbose, well documented, development version of a program into a memory-efficient, more secure, production version of the same program. This is the ORIGINAL and the BEST optimizer on the software market today!

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48K, Disk II, Apple II/Apple II +

DISK ORGANIZER is one of the fastest and friendliest utilities available today for organizing files on an Apple II diskette. DISK ORGANIZER provides the following functions: 1) Undeleting, 2) Deleting, 3) Purging deleted files, 4) Locking, 5) Unlocking, 6) Renaming, 7) Alphabetizing, 8) Custom re-ordering of catalog, 9) Use of DOS sectors for added data storage, and 10) Dynamic display of ALL filenames on a diskette. DISK ORGANIZER uses a very powerful SMART KEY to automatically locate the next valid filename for any specified disk operation. The program is completely menu driven and attains its speed by altering a local, RAM version of the catalog prior to optionally modifying your actual disk directory. DISK ORGANIZER is fully compatible with all existing versions of Apple DOS.

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48K + , Disk II, Apple II/Apple II + ... (2 Disks)

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DISK RECOVERY ("THE SCANNER")

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48K + , Disk II, Apple II/Apple II +

This program is long overdue. You need no longer be concerned with the problem of physically damaged disks. Just as "Apple Pascal" provides a "BAD BLOCK SCAN", DISK RECOVERY will do a complete scan of your Apple diskettes' recording surface. Damaged areas will be "marked" as used in the disk directory so that no attempts will be made to "WRITE" to a bad sector. The VTOC will be completely redone to reflect both the bad sectors and actual disk usage. A complete report is generated advising the user of all corrections. A resulting "DISK MAP" is presented for your review. The greatest advantage of this program over the other versions is that it can be used on either NEWLY INITIALIZED DISKS or disks that ALREADY CONTAIN PROGRAMS as well as the SPEED of analysis. THE SCANNER is fully compatible with both 13 and 16 sector diskettes. This is a must for all Disk II owners!

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APPLE II USER'S GUIDE A Review

Byron Kuroda

Readers who own 8080 or Z80 systems are probably already acquainted with OSBONE/McGraw-Hill's various publications for that CPU. Osborne also publishes the well-known business package in Basic. With the APPLE II USER'S GUIDE, by Lon Poole, et al, Osborne enters the Apple orchard. This 385-page book (called a "Guide") is advertized as "the key to unlocking the full power of your Apple". I'm not sure that it'll unlock the "full power" and all that, but it is a very impressive book that a serious beginner should have and study. With numerous short programs and adequate explanation, a new user could quickly be programming quite nicely. This book documents the

Apple better than what one gets with the machine. For one thing, there are more examples. I would like to list out the features of the book, but there are too many: it is, after all, 385 pages long. I suggest that you look through it at your local computer store; and if they don't have it, then ask them to order it. They'll have no trouble selling a lot of copies.

So a suggestion for the Apple Company: just as you give Bowles' PROBLEM SOLVING USING PASCAL along with the Language System, you should consider giving Poole's APPLE II USER'S GUIDE along with the machine.

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A PRINTER DRIVER FOR THE EPSON MX-80

Pete Nielson

If you're like me, you got your EPSON MX-80 and immediately wrote a basic program to print the alphabet in all of the available print styles.

In my case, that experiment resulted in the realization that the compressed/expanded mode is as attractive as the enhanced mode, and requires only half the time to print!

Unfortunately, expanded mode is turned off at each carriage return. So the hybrid mode is very difficult to use except in special cases.

There is a relatively easy way to get around this difficulty for the PIE FORMATTER. The following printer driver will enable PIE and the PIE FORMATTER to print in the compressed/expanded mode.

To use the driver, RUN FP SYSGEN FORMAT, and change the printer driver address to \$0300. (while you're there you should change the line length to 66 or

less). BLOAD the printer driver and BRUN FORMAT. To use the exit from PIE, do a >\$300 instead of >#1

You may also:

```
LOAD PROGRAMMA: WORD
    PROCESSINGctrl-j(return)
50 PRINT CHR$(4);"BLOAD printer driver"
UNLOCK PROGRAMMA: WORD
    PROCESSINGctrl-j(return)
SAVE PROGRAMMA: WORD
    PROCESSINGctrl-j(return)
```

One word of warning, remember that the compressed/expanded mode prints only 66 characters per line, compared to 80 characters per line for the normal mode. Your documents will format differently in this new mode, and if the printer wraps a line because it exceeds its internal length, it will turn off expanded mode, resulting in some bizzare formats.

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```

        SBTL 'PRINTER DRIVER'
COUTA EQU $36  COUT ROUTINE ADDRESS
DC1 EQU 17  ENABLE PRINTER
ENL EQU 14  SET ENLARGED MODE
COM EQU 15  SET COMPRESSED MODE
CR EQU 13  MSB OFF CR
CR1 EQU $8D  MSB ON CR
*
*
*
        ORG $300
START PHA      ;SAVE FIRST
;              CHAR FOR LATER
        LDA #DC1  ENABLE PRINTER
        JSR $C100 PR#1
        LDA #COM  SEND SET
;              COMPRESSED MODE
        JSR $C103 WARMSTART ADDRESS
        LDA #ENL  SET ENLARGED MODE
        JSR $C103 CALL THE CARD
        PLA      ;GET SAVED CHARACTER

```

```

*
*
*
LABEL PHA      ;SAVE A JUST IN CASE
        CMP #CR  IS IT A
;              CARIDGE RETURN?
        BEQ LABEL1 IF SO PROCESS IT
        CMP #CR1 IS IT THE OTHER CR
        BNE LABEL2
LABEL1 JSR $C103 PUT OUT THE CR
        LDA #ENL  RESET ENLARGED
;              MODE
LABEL2 JSR $C103 PUT OUT THE
;              CHARACTER
LABEL3 PLA      ;RESTORE A
        LDA #>LABEL GET LSB OF LABEL
        STA COUTA STORE IN
;              COUT VECTOR
        LDA #<LABEL GET MSB OF LABEL
        STA COUTA+1
        RTS

```

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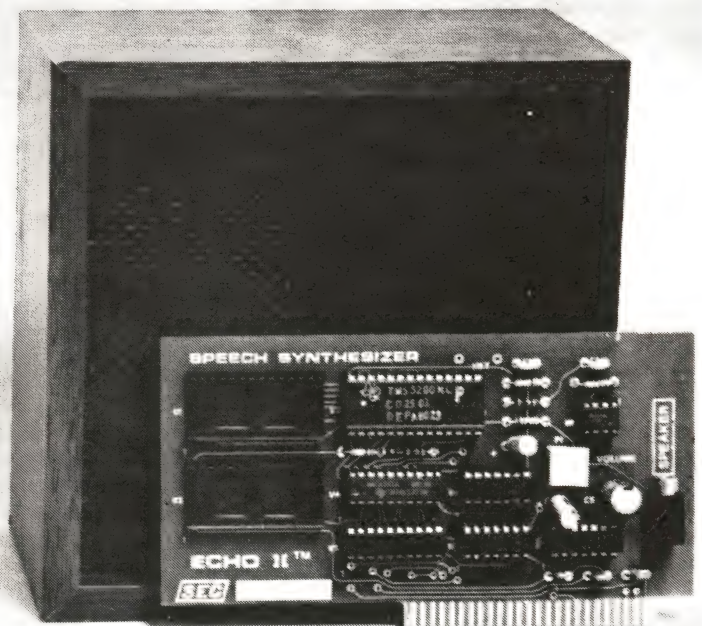


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LASER AND TONE GENERATOR

Peter Stone

Here is a little program that will enable you to call up tones beyond your imagination. If you want Lasers, Tones, Music, Razzes or whatever you like, you will love this little program.

Here is the listing:

```
10 FOR I = 768 TO 833:READ
   D:POKE I,D: NEXT I

20 DATA 201,84,208,15,32,177,
   0,32,248,230,138,72,32,183,
   0,201,44,240,3,76,201,222,
   32,177,0,32,248,230

30 DATA 104,134,3,134,1,133,
   0,170,160,1,132,2,173,48,
   192,136,208,4,198

40 DATA 1,240,7,202,208,246,
   166,0,208,239,165,3,133,
   1,198,2,208,241,96
```

```
50 POKE 1013,76:POKE 1014,0:
   POKE 1015,3
```

This is how the generator is activated. Within a program, you must type the following:

```
&T X,Y
X = Tone. (0=High note, 255 = Low)
Y = Duration. (0=Fast, 255 = Slow)
Example:
10 FOR I = 1 TO 100:&T34,190:
   NEXT I
```

would produce a fairly high tone at medium duration.

I used this generator for my Laser Blast program in the OAC May '81 Disk of the Month and (if you got the disk), you can hear it. It is very useful.

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APPLE BASIC FOR BUSINESS FOR THE APPLE II A Review

Marc A. Ries

APPLE BASIC FOR BUSINESS FOR THE APPLE II (Reston Va.: Reston Publishing Company, 1981, \$11.95) by Professors Alan J. Parker and John F. Stewart is one book every serious user of the APPLE should have near at hand. Utilizing over three hundred pages of text, the authors guide the reader from "basic" business applications to the design and use of complex programs and advanced concepts.

What about the reader who is not particularly interested in "business" programming? APPLE BASIC FOR BUSINESS is still by far the best book available to help him understand the set-up, use, and maintenance of sequential and random disk files. Written in a simple, easily understood style, the text of the book utilizes small "projects" as building blocks for more advanced programming concepts.

Parker and Stewart cover such conventional business topics as inventory, wages, and accounting, as well as more specialized topics like reference tables and sorting lists. And every step of the way, there are explanations, examples, and sample problems to help the reader comprehend the concepts being presented.

This book is for APPLE users who really want to understand sequential and random file theory, although most emphasis is placed on sequential access disk files. Those readers who were discouraged by the dry text of Apple's DOS OPERATING SYSTEM, who were inspired by the APPLE II USER'S GUIDE, and who have given up on the multitude of published BASIC programs which use cassette and data line input should add APPLE BASIC FOR BUSINESS to their libraries. The fact that the authors deal with business-related applications is just icing on the cake!

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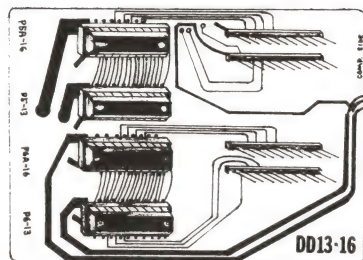
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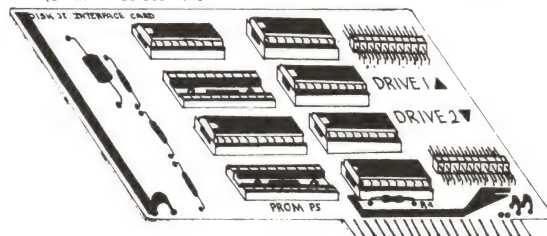
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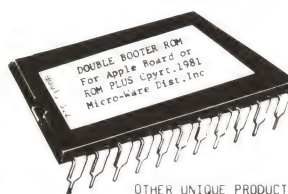
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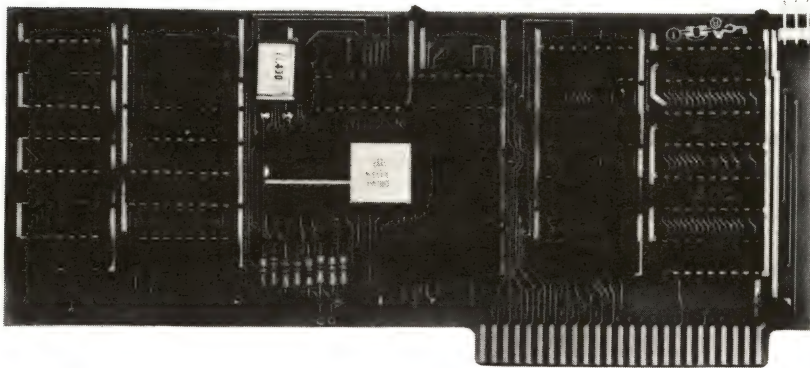
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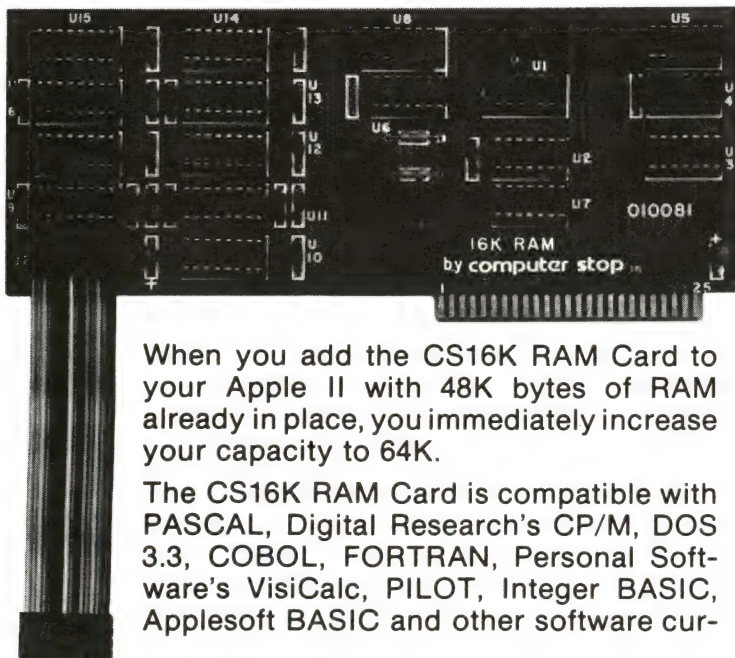
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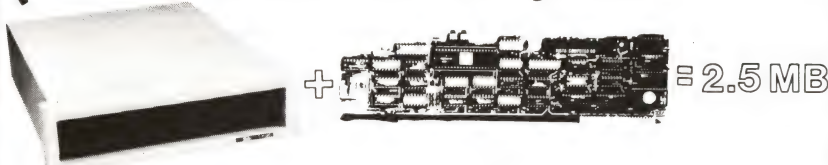
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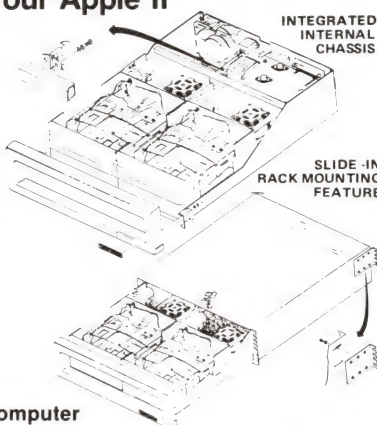
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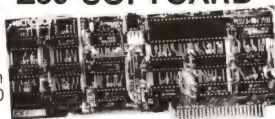
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Bulletin Boards

Joel L. Amromin

A major area of interest in telecomputing is bulletin boards. A bulletin board is a computer which has been set up so that people can call it up and leave messages for specific individuals or for anybody in general. You can also read messages that have been left on the system. These systems are easy to use, being menu driven. Below is a list of some of the systems in the L.A. area. Dial these with your modem and try them out. They can be lots of fun, as well as a good source of new and ads.

1. Original Apple Corps 213 340-0135
2. Apple Bulletin Board Systems
Rainbow Computing 213 349-5728
The Computer Store 213 394-1505
Pacific Palisades 213 459-6400
3. People's Message Systems
Los Angeles 213 291-9314
San Diego 714 449-5689

This is just a small sampling of what is available. The PMS systems are very elegantly written systems with expanded functions, including support of upper and lower case. While many of the ABBS systems tend to have a lot of miscellaneous personal stuff, the PMS systems tend to have a lot of GOOD information on them. They also have uploading and downloading facilities for transferring programs into and out of libraries which they maintain.

The Original Apple Corps' system is not a PMS but it does support its features. It is very popular, receiving calls from all over the nation. Besides general info, it has bulletins about Apple Corps meetings, classes, and other club news.

The Computer Store Bulletin Board, run by The Computer Store in Santa Monica, is now providing an information service. If you have any questions about Apples, or for that matter, anything else that the store might be able to help with, leave a

message addressed to SYSOP (System Operator). State your question as succinctly as possible. Please leave a phone number where we can reach you by voice call. If your question cannot be replied to via the Bulletin Board (or if another caller didn't beat the store to it), we will call you.

You can also get information about the Source Apple Users Group from The Computer Store ABBS. At the command level of the Bulletin Board, type "SAUG." I don't know if any other ABBS's are providing such services. If so, please write to me care of APPLESAUCE to let me know and I will pass the word. Or you can leave a message addressed to me on The Computer Store ABBS.

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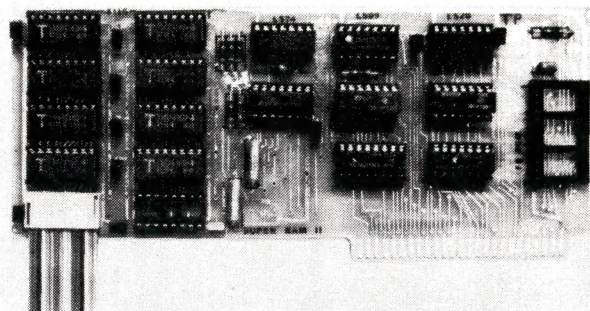
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